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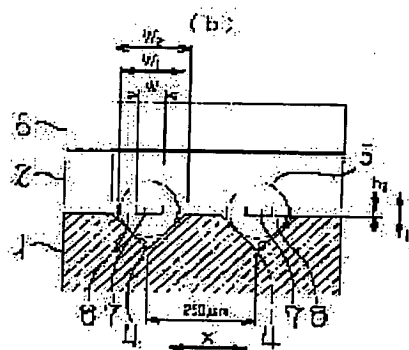
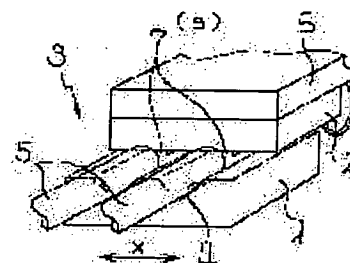
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## (54) OPTICAL TRANSMISSION MODULE AND ITS MANUFACTURE

### (57)Abstract:

PURPOSE: To facilitate the manufacture and mounting by adhering and fixing an end surface type semiconductor element on a guide substrate for arraying optical fibers and performing back mounting, and then enabling easy and correct assembly and optical coupling with small variance and high efficiency.

CONSTITUTION: On a guide substrate 1, V grooves 4 as V-shaped recessed fiber fixation parts are formed, and in the V grooves 4, the optical fibers 5 are arrayed at a  $250\mu\text{m}$  pitch in the array direction X. The end surface type semiconductor element 2 is provided on a subordinate substrate 6, and light emission parts 7 which are  $2-3\mu\text{m}$  in height are arrayed on the array surface at a  $250\mu\text{m}$  pitch in the array direction. Array-directional positioning parts 8 in a projection flat plate shape are arranged in fitting areas behind those light emission parts 7. For the back mounting, the projection positioning parts 8 are adhered and fixed by fitting in the recessed V grooves 4 of the guide substrate 1. Consequently, the assembly is performed easily and correctly and the optical coupling with high efficiency and small variance can be performed.



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